



REAL81(REAL80)-4-35-ND-R-C4-SN-MH Direct

Luminaire Description: Rectangular wooden sidepanels with metal housing and diffuse lens
Lamp: 96 White LEDs
Mounting: Pendant
Ballast/Driver: One (1) Philips Advance XI040C110V054BST1

Luminaire



Luminaire Characteristics

Luminous Length: 46.50 in.
 Luminous Width: 2.000 in.
 Luminous Height: 1.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 1595 Lumens
 Efficacy: 55.85 lm/w
 CCT: 3480 K
 CRI (Ra): 94.1

Distribution

Total Luminaire Output: 1573 Lumens
 Luminaire Efficacy: 54.9 lm/w
 Maximum Candela: 850 Candela

Electrical Data at 120 VAC

Test Temperature: 24.4 °C
 Voltage: 120.0 VAC
 Current: 0.2393 A
 Power: 28.56 W
 Power Factor: 0.994
 Frequency: 60 Hz
 Current THD: 9.00 %



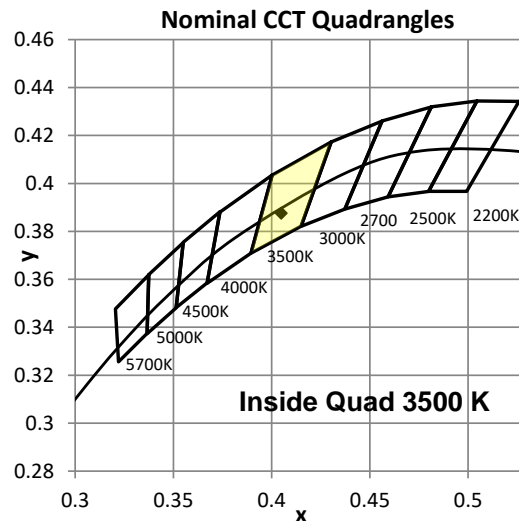
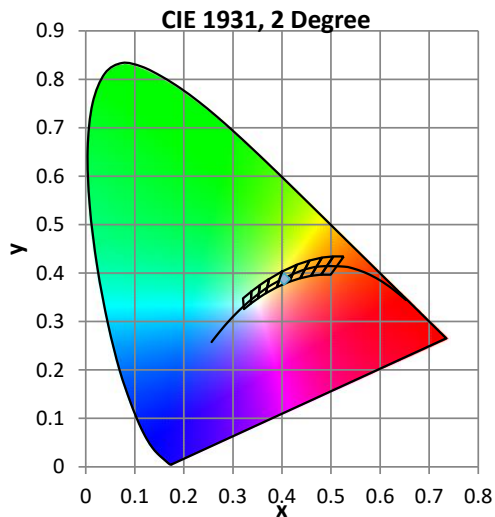
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.2393 A	28.56 W	0.994	60 Hz	9.00 %

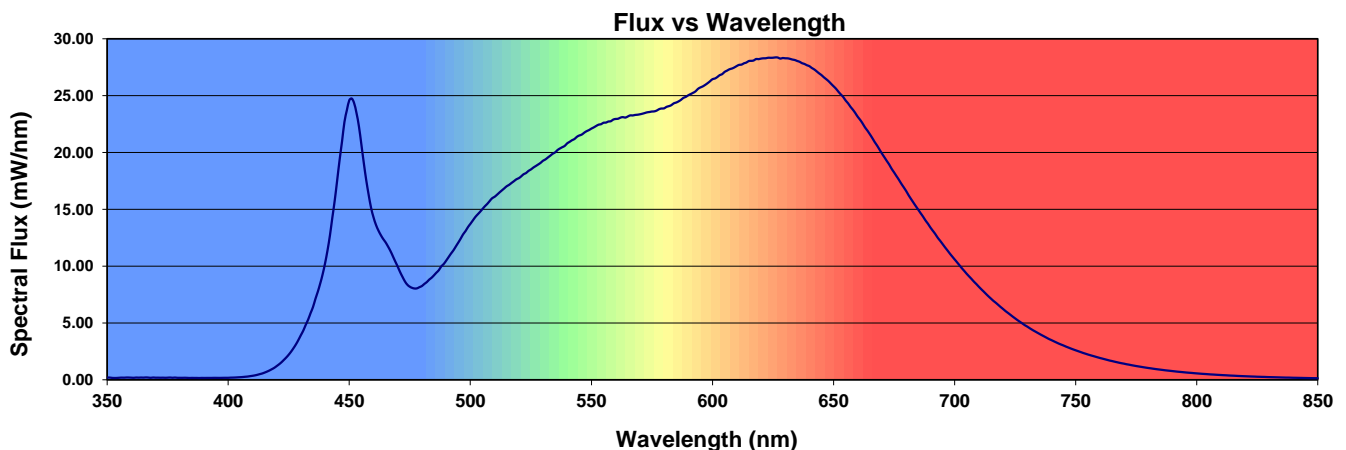
Summary of Results

Total Output:	1595 Lumens	Chromaticity (x):	0.4049
Efficacy:	55.9 lm/w	Chromaticity (y):	0.3876
CCT:	3480 K	Chromaticity (u'):	0.2367
CRI (Ra):	94.1	Chromaticity (v'):	0.5099
CRI (R9):	76.1	TM-30 Rf:	92.2
Peak Wavelength:	626 nm	TM-30 Rg:	101
Dominant Wavelength:	582 nm	Duv:	-0.0015
S/P Ratio:	1.61		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94.1	95.1	95.8	94.4	94.6	94.1	93.1	95.5	90.4	76.1	88.7	94.2	77.8	95.3	96.3	94.1





Distribution - Goniophotometer

Distribution Test Conditions

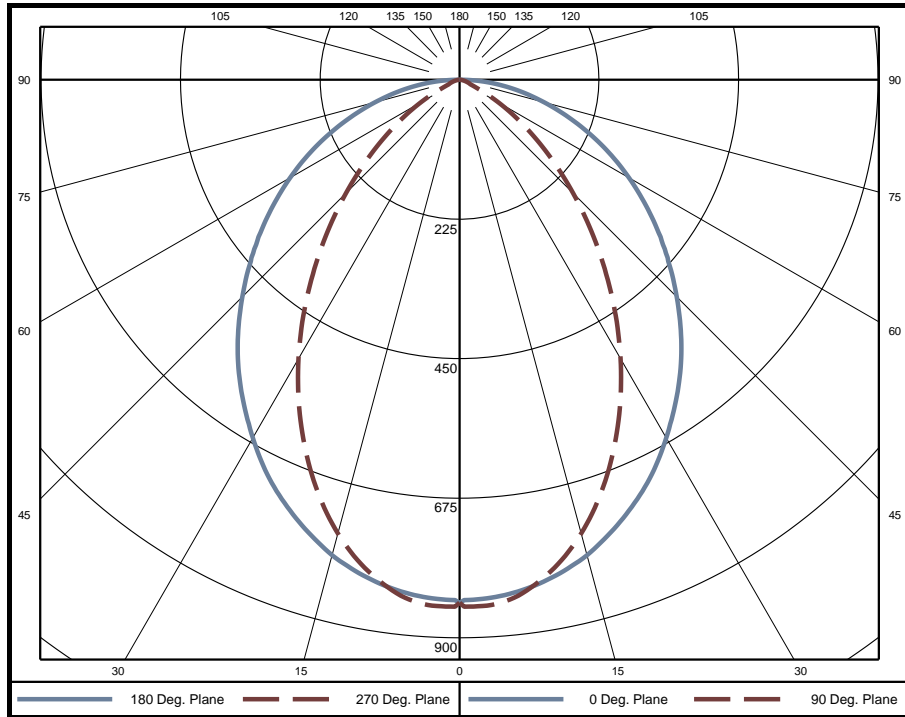
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.2399 A	28.63 W	0.994	60 Hz	8.94 %

Summary of Results

Spacing Criteria
 0-180: 1.18
 90-270: 0.99

Total Lumen Output: 1573 Lumens
Luminaire Efficacy: 54.9 lm/w
Maximum Candela: 850 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	20.1	1.3%	60-65	66.7	4.2%	120-125	0	0.0%
5-10	59.2	3.8%	65-70	44.6	2.8%	125-130	0	0.0%
10-15	94.5	6.0%	70-75	28.1	1.8%	130-135	0	0.0%
15-20	123.6	7.9%	75-80	15.9	1.0%	135-140	0	0.0%
20-25	145.1	9.2%	80-85	7.4	0.5%	140-145	0	0.0%
25-30	158.2	10.1%	85-90	2.0	0.1%	145-150	0	0.0%
30-35	162.8	10.3%	90-95	0.0	0.0%	150-155	0	0.0%
35-40	159.4	10.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	149.0	9.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	133.0	8.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	112.9	7.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	90.4	5.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	923	58.7%
0-60	1408	89.5%
0-90	1573	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7	843.7
5	834.3	838.8	839.8	838.3	844.4	838.3	839.8	838.8	834.3	838.8	839.8	838.3	844.4	838.3	839.8	838.8
10	818.6	823.6	817.0	807.7	811.1	807.7	817.0	823.6	818.6	823.6	817.0	807.7	811.1	807.7	817.0	823.6
15	794.0	796.2	776.7	758.1	757.8	758.1	776.7	796.2	794.0	796.2	776.7	758.1	757.8	758.1	776.7	796.2
20	758.4	754.7	723.3	693.7	687.8	693.7	723.3	754.7	758.4	754.7	723.3	693.7	687.8	693.7	723.3	754.7
25	717.3	704.4	658.6	617.3	606.5	617.3	658.6	704.4	717.3	704.4	658.6	617.3	606.5	617.3	658.6	704.4
30	667.2	647.5	586.7	534.4	519.2	534.4	586.7	647.5	667.2	647.5	586.7	534.4	519.2	534.4	586.7	647.5
35	614.0	584.8	510.1	448.6	429.4	448.6	510.1	584.8	614.0	584.8	510.1	448.6	429.4	448.6	510.1	584.8
40	557.1	518.1	432.3	362.6	341.0	362.6	432.3	518.1	557.1	518.1	432.3	362.6	341.0	362.6	432.3	518.1
45	496.0	450.4	354.3	280.9	259.0	280.9	354.3	450.4	496.0	450.4	354.3	280.9	259.0	280.9	354.3	450.4
50	434.9	381.8	277.7	206.0	185.5	206.0	277.7	381.8	434.9	381.8	277.7	206.0	185.5	206.0	277.7	381.8
55	375.0	313.3	205.6	140.0	122.4	140.0	205.6	313.3	375.0	313.3	205.6	140.0	122.4	140.0	205.6	313.3
60	315.6	245.9	139.8	84.1	69.3	84.1	139.8	245.9	315.6	245.9	139.8	84.1	69.3	84.1	139.8	245.9
65	256.6	180.4	82.5	36.5	27.3	36.5	82.5	180.4	256.6	180.4	82.5	36.5	27.3	36.5	82.5	180.4
70	197.6	118.7	33.8	16.3	15.9	16.3	33.8	118.7	197.6	118.7	33.8	16.3	15.9	16.3	33.8	118.7
75	142.1	63.0	13.3	10.5	10.1	10.5	13.3	63.0	142.1	63.0	13.3	10.5	10.1	10.5	13.3	63.0
80	91.5	18.8	7.0	5.4	5.2	5.4	7.0	18.8	91.5	18.8	7.0	5.4	5.2	5.4	7.0	18.8
85	44.4	6.0	2.3	1.6	1.5	1.6	2.3	6.0	44.4	6.0	2.3	1.6	1.5	1.6	2.3	6.0
90	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

	0	45	90
0	14060	14060	14060
45	11450	6101	4070
55	10570	3914	2075
65	9672	1816	520
75	8470	361	226
85	6811	83	44

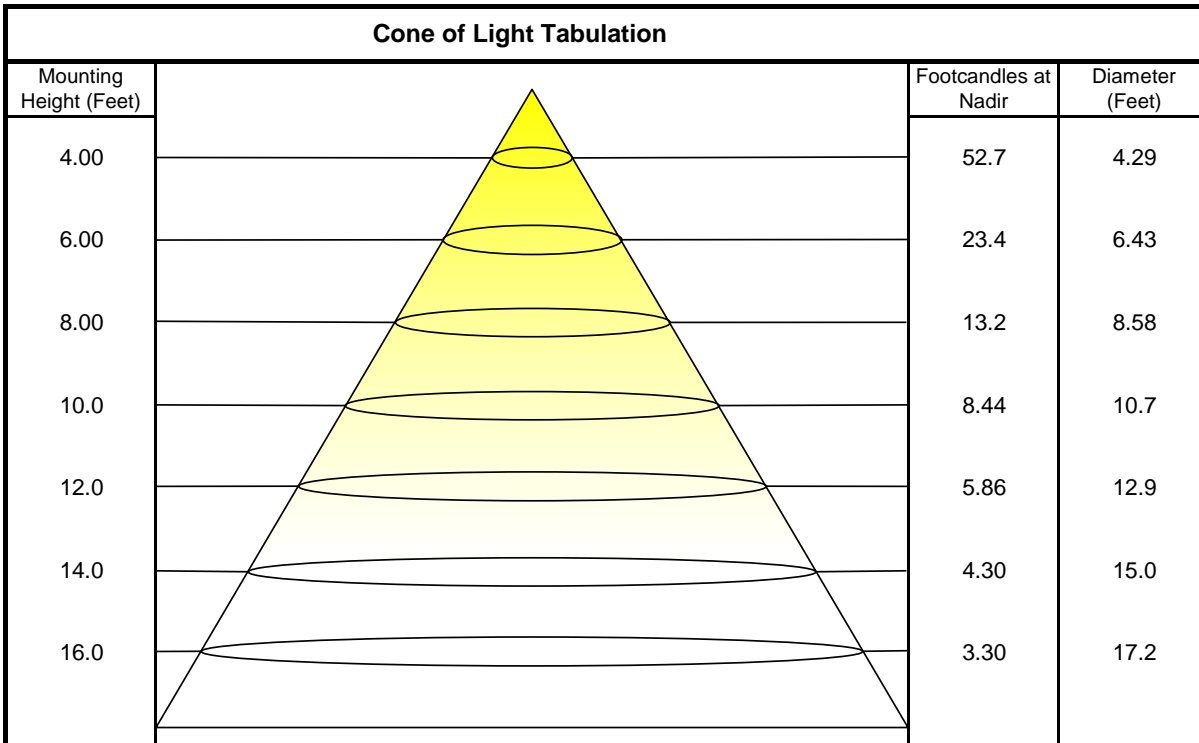


Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%

Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as percent of total lumen output delivered to the task surface **																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	105	101	99	100	98	95	97	95	93	93	91	90	88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76
3	95	86	78	73	92	84	78	72	81	76	71	79	74	70	76	72	69	67
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	46
7	70	58	50	45	69	57	50	45	56	49	44	55	48	44	53	48	44	42
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	35
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32

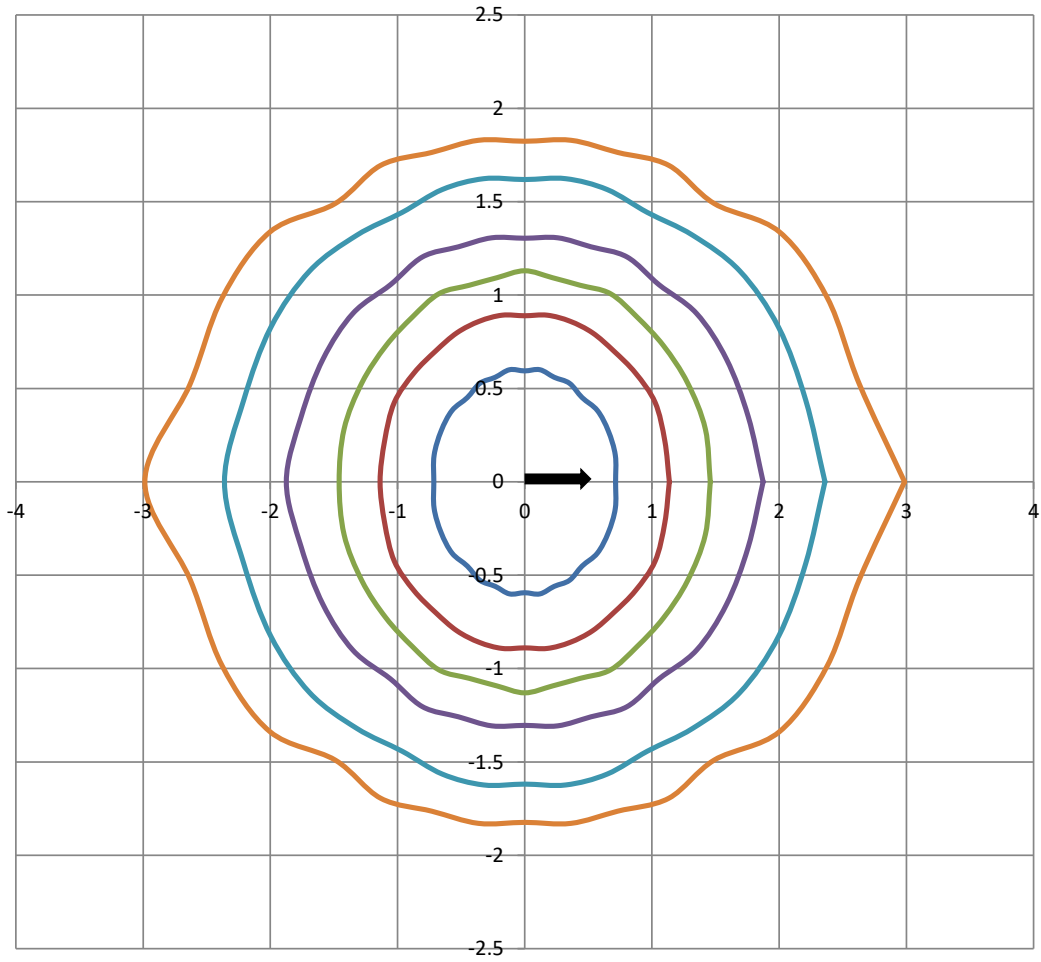
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	843.7 Candela
Central Cone Intensity:	842 Candela
Beam Flux:	1005.1 Lumens
Beam Angle (0-180):	102.1 Degrees
Beam Angle (90-270):	70.8 Degrees
Field Angle (0-180):	161.5 Degrees
Field Angle (90-270):	117.0 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

